

DOCUMENT RESUME

ED 114 237

RC 008 861

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TITLE The Telepac Project: A Service Delivery Model for the Severely Handicapped in Rural Areas.
INSTITUTION Utah State Univ., Logan.
PUB DATE May 75
NOTE 47p.
EDRS PRICE MF-\$0.76 HC-\$1.58 Plus Postage
DESCRIPTORS *Delivery Systems; Education; *Handicapped Students; *Homebound Children; Instructional Materials Centers; Models; Parent Role; Professional Personnel; Programmed Materials; *Rural Areas; *Telecommunication; Telephone Instruction
IDENTIFIERS *Project Telepac; Utah State University

ABSTRACT

The Utah State University (USU) "Telepac Project" is a service delivery model for homebound handicapped children living in rural areas. Designed to effectively utilize limited numbers of professional personnel, Telepac makes use of: (1) telecommunications technology; (2) parents as a basic treatment resource; and (3) the technology of instructional packaging. Telepac's central component is the Homebound Handicapped Resource Center (HHRC) which includes: (1) a parent resource library; (2) a curriculum resource unit; (3) a multimedia collection; and (4) a telecommunications system. As the source of administration and instruction, HHRC services the home; a local program monitor (LPM), and a local parent group. The curriculum resource unit develops and disseminates "Parent Involvement Packages" which provide for: (1) training of the child in the home; (2) training of the parent; and (3) involvement of LPM. These packages are supplemented by the multimedia collection and the parent resource library. Utilizing standard telephones equipped with intercoms, the telecommunications system provides for interactions between parents, HHRC, the LPM, and consultant services. The LPM is a professional who helps coordinate: (1) identification and screening of potential families; (2) notification and involvement of the parents; and (3) liaison with HHRC. (JC)

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A Service Delivery Model for the Severely Handicapped
In Rural Areas.

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A major problem encountered in attempts to provide services to the handicapped homebound child in rural areas is the lack of specialized facilities. In urban areas, the population is often sufficient to support a centralized facility which (1) provides specialized personnel and services for the handicapped child, and (2) provides resources and training to the educator not specifically trained to meet the needs of the child with severe handicaps. The problems of time and distance associated with rural areas make the cost factor so high that centralized facilities have difficulty meeting the day to day training needs of children living in sparsely populated areas. The Utah State University "Telepac" Project is a service delivery model which makes use of: (1) telecommunication technology, (2) parents as a basic treatment resource, and (3) the technology of instructional packaging.

A program which uses telecommunications to make effective use of the limited number of professional personnel available in rural areas appears to be one means of reducing the effects of

time and distance problems. Ghatala and Wedemeyer (1973) made the following observation:

Telecommunications, properly used, can be one of the most effective tools for distant teaching and learning yet employed. Educational communications offers a unique way to provide opportunities for learning to large numbers of spatially separated learners Appropriate application of media, technology, and communications to education is capable of individualizing, humanizing, personalizing, and optimizing instruction and learning. (p 63)

A comparatively recent development in the field of instructional technology is that of "package" development. Instructional "packages" allow the developer to have an impact without being present. In Project Telepac, the technology of package development is being used to advantage in overcoming some of the problems associated with instruction in rural areas.

Among the untapped manpower resources of rural areas are the parents or other members of the child's family. A training program which utilized local resource personnel (e.g. educators and public health nurses) and parents and had a low initiation and maintenance cost would be consistent with resources available in the rural setting.

The Telepac Project is presently in the initial development and validation phase. In developing and assessing the different components of the service delivery model, the following factors were taken into consideration.

- (1) Limited funds suitable for continuation after expiration of development funds.
- (2) Limited availability of professionals.

- (3) Limited hardware servicing facilities.
- (4) Relatively low level of development in curriculum programming and validation for the severely handicapped (the history of instructional technology is replete with examples of ineffective instruction being mediated by sophisticated hardware systems).
- (5) Need for highly individualized approaches.
- (6) Limited response capability of the severely handicapped child.
- (7) Limitations imposed by time and distance factors in sparsely populated areas.

After reviewing a variety of telecommunications possibilities, it was felt that the standard telephone system was the most appropriate telecommunication system for rural areas.

Despite the availability of the telephone to the education profession, Rao and Hicks (1972) note, "The educational enterprise in North America, in spite of its heavy dependence upon the telephone for administrative communications, does not seem to have realized the potential of the telephone as an instructional communications device (ICD). There have been few cases where the telephone was used as an ICD with fruitful results, and its full potential has yet to be explored." (p 18)

The Telephone and the Homebound

A California telephone company offers a special service called

"Teleclass." At the request of a parent, a "telephone teacher" calls a handicapped or homebound youngster on the telephone at a regular time each day. The teacher conducts a class over the phone with one child or as many as 20 children simultaneously. Equipment can be modified to accomodate youngsters with motor disabilities. This service is available at monthly rates. One school district using this telephone service is the Oakland district, which developed the elementary Tele-Teaching Program (Steele, 1969).

In Illinois, the telephone company is conducting a program called "home to school" service. Selected classrooms have been fitted with special portable telephones that are connected by ordinary telephone lines to the home telephone of a handicapped or bedridden child. A special microphone at the teacher's end picks up all classroom discussion so the home student can hear his classmates, as well as his teacher. Modified "talk-listen" switches permit disabled youngsters to operate the equipment (Lewis, 1971).

As one reviews the literature on the use of the telephone with the homebound handicapped, a clear and unfortunate pattern emerges--the severely mentally and emotionally handicapped child has been virtually totally ignored. School districts have screening techniques designed to make sure that only the chronically ill and physically handicapped participate in the telephone related programs. The reason for exclusion of the severely mentally

and emotionally handicapped appears essentially to be the same as used for segregating the less handicapped child attending school; namely, an attitude which states "you are not welcome if you are not able to fit in with the instructional processes that exist in the traditional classroom."

Parents and Remediation

There is a trend on the part of school programs to involve parents in strategies for changing the behaviors of their children. Lloyd (1965) described a program in the New York City schools which involved parents in teaching their children to read. One parent tutoring program's success in increasing children's reading skills led to its being extended to six public and seven parochial schools in the community (Pollack, 1969).

The emergence of behavior modification as a treatment technique, and the use of nonprofessionals, especially parents, have added a new dimension to the prevention and remediation of educational problems of students (Clement, 1971; Latham, 1971; Patterson & Cobb, 1972).

Efforts to train parents to alter the behavior of their own children in the home have led to the development of both intervention procedures and programs for training of nonprofessionals. Ray (1965) trained four mothers of atypical children (mentally retarded, autistic, etc.) to use techniques of behavior management.

Similar techniques were used by Morrey (1970) in an attempt to increase parents' ability to manage children at home. He successfully trained parents to manage selected behaviors of their mentally retarded children.

Smith and Brahce (1963) reported that parents can make positive changes in children's learning. The essential components of the program they described were parent meetings and getting parents to work with other parents. Their research indicated overall gains for the children of 5.4 months in reading during a five month treatment program. Children in the control group gained 2.7 months in reading during the same period. Luszki and Schmuck (1965) reported improved functioning in school and greater "self-esteem" for elementary school students who perceived their parents as being supportive of school activities. Their results indicated that parental support of school was more important in the elementary school years.

Most of the attempts to train parents to manage their children have required the presence of a professional leader. Within the last six years, several training texts have been published by professionals for parents. These publications were designed to train, or suggest methods to parents for better home management. The Krumboltz and Krumboltz (1972) text, Changing Children's Behavior, gives principles and actual examples on how to change inappropriate behavior. Illustrations are based on real happenings, such as "generating enthusiasm for school", "learning to enjoy

reading", "improving mathematical skills", and many other management situations parents and educators are often confronted with. Patterson (1971) published a text Families. This text for parent and professionals is based on Patterson's research in the area of "social learning technology". Becker's (1971) book Parents are Teachers was designed to be used by either professionals in parent training programs or independently by parents. The objective of Becker's manual was to teach parents to use positive reinforcement systematically in raising their children. Zifferblatt (1970) published a book to guide parents in techniques of reinforcing the study behaviors of their children and in scheduling study times. Patterson and Gullion (1968) published a program text for parents. This text, Living With Children, programmed techniques for parents to use in managing the "problem" behaviors of their children. In 1966, Smith and Smith published a self-instruction booklet with a discussion guide for parents.

Some of the most substantial efforts in the area of the severely retarded have been those generated by a team of program developers at Teaching Research, Monmouth, Oregon (Baldwin, Fredericks, & Brodsky, 1973).

The above mentioned studies are representative of the more recent attempts to train parents in the management of their children. The most replicable programs appear concerned with decreasing

inappropriate social behavior. Many of the studies included the heavy involvement of professional personnel and resources outside that available to the rural school district. A serious deficiency in several of the programs was the lack of replicable skill-oriented programs for parents of the severely handicapped homebound child.

Project Telepac: Program Description

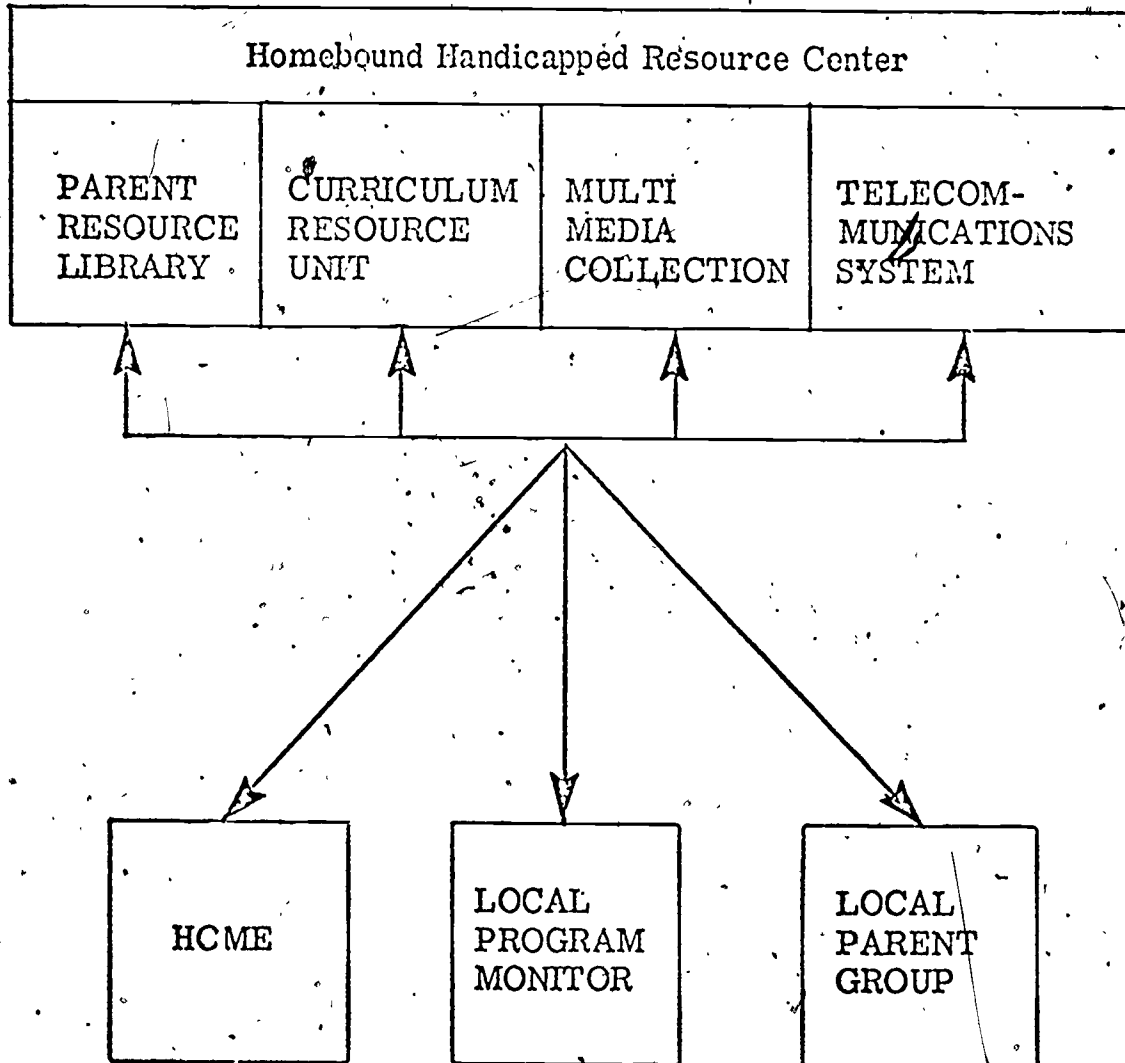
The basic components of Project Telepac are outlined in Figure I. The central component is the Homebound Handicapped Resource Center (HHRC). The HHRC has four components: (1) the parent resource library, (2) the curriculum resource unit, (3) the multimedia collection, and (4) the telecommunications system. These four components service the home, the local program monitor, and the local parent group.

The Homebound Handicapped Resource Center (HHRC)

The HHRC is the basic source of administrative and instructional management. The HHRC is located in the Exceptional Child Center at Utah State University and serves as the base for program development and validation as well as service. The Center is available to serve in a demonstration capacity in the same way as it operates demonstration programs in the treatment of the severely retarded, the hard of hearing, and the emotionally

Figure 1

BASIC COMPONENTS OF
THE SERVICE DELIVERY SYSTEM



disturbed. The following are the major divisions of the Homebound Handicapped Resource Center:

Curriculum/Resource Unit. The curriculum resource unit is responsible for the development and dissemination of Parent Involvement Packages (see appendix I for a listing of packages under development). Each package provides the parent with a direct instructional procedure (scripted format) for introducing and teaching an unmastered skill or concept to his child. Correction procedures and techniques for providing practice in the new skill or concept are also specified for the parent. Child management procedures are tied directly to the teaching sequences via suggestions for praising at specified points and suggestions for employing token economies within the teaching sequence, pre/post criterion referenced tests and administration procedures for continuous progress monitoring. Parent Involvement Packages have been written in the curriculum areas of arithmetic, language arts, self-help skills, and recreation/leisure time. The curriculum was not meant to be comprehensive, but is sufficient to provide validation data on the service delivery model in both academic and self-help areas.

Parent Resource Library. Because the packaged curriculum is not fully comprehensive, a set of books and pamphlets is used to

supplement the training needs of parents. The Parent Resource Library consists of materials carefully screened and selected to provide practical "how to" content.

Multimedia Collection. Like the Parent Resource Library, the Multimedia Collection is designed to provide parents with a training materials resource supplemental to the more specific Parent Involvement Packages. The collection consists of slide/sound sets, films, records, tapes, and supporting paper/pencil materials that were selected because the content provides techniques for parents to use in teaching their severely handicapped child. Materials from the Multimedia Collection are most often used in group settings, such as part of the program for a local Association for Retarded Citizens meeting.

Telecommunications System. A Wide Area Telecommunications System (WATS) provides for a variety of interactions between the parent, the Homebound Handicapped Resource Center, a local program monitor (LPM), and a variety of consultant services. The utilization of standard telephones equipped with intercom speakers is consistent with the resources available in rural areas.

The Service Delivery Model. In order to achieve replication and a high level of exportability of the treatment processes, the treatment component of the model emphasizes the use of the Parent Involvement Packages. These packages provide for replicable administrative and training procedures at three levels: (1) the training of the handicapped child in the home, (2) the training of the parents, and (3) the involvement of the local program monitor.

Training of Pupils. This is done by the parents or other member of the child's family. The curriculum and training procedures are presented and programmed by the Parent Involvement Packages. These packages are used in conjunction with visits from homebound teachers where such homebound instruction is available.

Training of Parents. The training of the parents is also accomplished by the Parent Involvement Package. Each Parent Involvement Package trains the parents in: (a) direct teaching of selected skills, (b) supervision of practice of these skills, and (c) monitoring of pupil progress in the skills. Telephone conferences between the parent and the Homebound Handicapped Resource Center (see Figure 1) are an important component of both package development and evaluation, and on-going service procedures.

Training of the Local Program Monitor. The local program monitor (LPM) is a local educator, health or social worker. The LPM helps coordinate (a) the identification and screening of potential families, (b) the notification and involvement of the parents, and (c) the liaison with the Homebound Handicapped Resource Center (HHRC). The local program monitor also receives information, help, and training from the HHRC.

Telecommunications Interactions

The major thrust of the TELEPAC Project is the utilization of the telephone speaker-phone as a vehicle for the use and evaluation of packaged programs and other services of the HHRC. The toll-free WATS lines provide the parent with direct access to a resource teacher within the HHRC. The parent calls the resource teacher, or the request for services is initiated by the LPM.

Many of the interactions between the HHRC and the home are taken over by a local program monitor. Where possible, the Center attempts to encourage expertise, independence, and resource development at the local level.

It is not possible for the HHRC to provide all the services that are requested by the parent or LPM. One such service is the facility to respond to a wide range of health related requests. In such cases, the HHRC establishes access to appropriate consultant services.

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